

Yelling Connector

Installation Guide

Version 1.0

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Overview

This document describes the installation, configuration and setup of components that allow capturing Yealink Action URL phone events in a FileMaker solution. The intended audience of this document is a desktop support person comfortable with installing and debugging web based software.

Components

The application comprises of 2 major components:

1. FileMaker client with a database solution containing the YealinkConnector FileMaker components (tables, fields, layouts and scripts). These components will allow recording of phone events in a call log and sending messages to control the phone set from FileMaker
2. Local Web Service. A web server on the desktop PCs will host a pair of scripts to receive the phone events from the Yealink set and a setup assistant page to help with configuring the Action .

The provided “Polycom Connector Web Service.zip” file contains a copy of the Polycom Connector web service script and a sample FileMaker database file with required components (tables, fields, layouts and scripts) for the application.

Dependencies

This application has these dependencies:

- Windows computer with
 1. FileMaker 16 Pro (or later) client
 2. XAMPP (or similar) Apache web server distribution (PHP 7.0.x recommended)
- Yealink SIP phone set (tested on T28P model)

Installation & Configuration

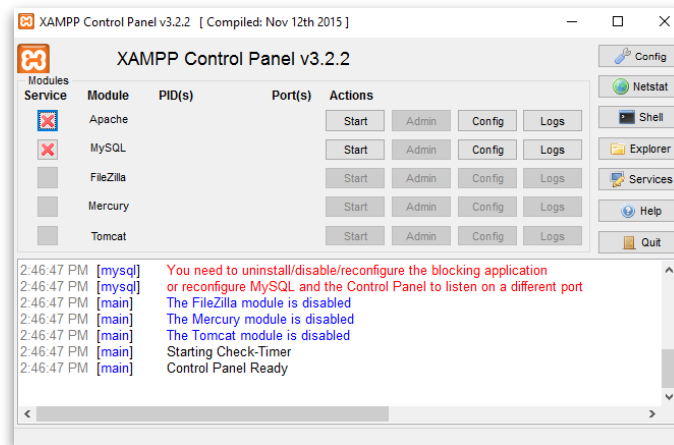
Yealink Connector Web Service Setup

The local Apache web server will have to be configured to listen for connections from the Yealink set, be set up as a service so it will automatically start when the computer restarts and have installed the Yealink Connector web service. The following instructions are written assuming Apache web server was installed on the desktop PC with the XAMPP package.

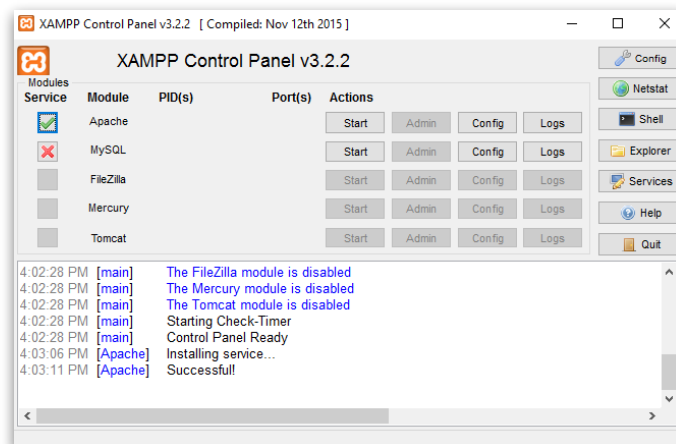
Setup Apache Service on Windows

This will allow Apache to automatically start as soon as Windows starts and ensure all phone events will be passed to FileMaker.

1. From the Windows menu locate the XAMPP Control Panel, right-mouse click and select "Run as administrator" (note: may be located under the "More" menu item)
2. In the XAMPP Control Panel click on the Apache Service button (box with red "X" in the Service column to the left Apache)



3. Follow the steps to install Apache as a service
4. In the XAMPP Control Panel you will now see Service button has a green checkmark

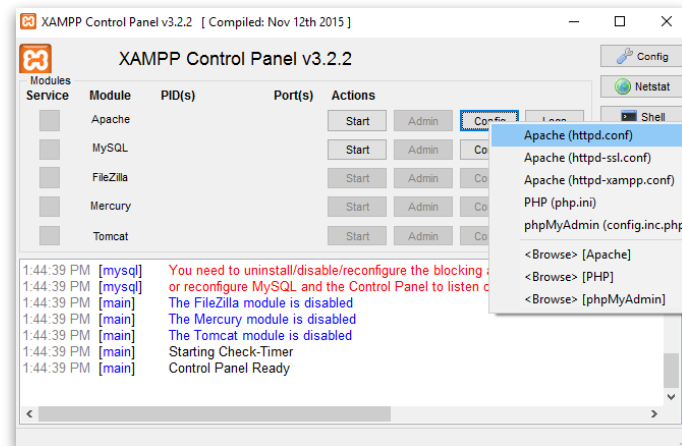


Yealink Connector Web Service (cont.)

Configure server to listen on an alternative port

There can be cases where the XAMPP Apache web server default port 80 will conflict with another service on your computer. Here is an example of how to change the XAMP Apache service to listen on an alternative port. Port 50505 is used in this example.

1. Open the XAMPP Control Panel
2. On the Apache row, click the Config button and select "Apache (httpd.conf)" from the menu to open the configuration file in a text editor (default editor is Notepad)



3. Find the "Listen" configuration line and change the port from the default "80" to "50505"

Before (default)

```

# Listen: Allows you to bind Apache to specific IP addresses and/or
# ports, instead of the default. See also the <VirtualHost>
# directive.
#
# Change this to Listen on specific IP addresses as shown below to
# prevent Apache from glomming onto all bound IP addresses.
#
#Listen 12.34.56.78:80
Listen 80

#
# Dynamic Shared Object (DSO) Support
#
# To be able to use the functionality of a module which was built as a DSO
# you have to place corresponding 'LoadModule' lines at this location so the
# directives contained in it are actually available _before_ they are used
# Statically compiled modules (those listed by 'httpd -l') do not need
# to be loaded here.
#
# Example:
# LoadModule foo_module modules/mod_foo.so
#
LoadModule access_compat_module modules/mod_access_compat.so
LoadModule actions_module modules/mod_actions.so
LoadModule alias_module modules/mod_alias.so
LoadModule allowmethods_module modules/mod_allowmethods.so
LoadModule asis_module modules/mod_asis.so
LoadModule auth_basic_module modules/mod_auth_basic.so
LoadModule auth_digest_module modules/mod_auth_digest.so
LoadModule auth_form_module modules/mod_auth_form.so
LoadModule authn_anon_module modules/mod_authn_anon.so
LoadModule authn_core_module modules/mod_authn_core.so

```

After (updated)

```

# Listen: Allows you to bind Apache to specific IP addresses and/or
# ports, instead of the default. See also the <VirtualHost>
# directive.
#
# Change this to Listen on specific IP addresses as shown below to
# prevent Apache from glomming onto all bound IP addresses.
#
#Listen 12.34.56.78:80
Listen 50505

#
# Dynamic Shared Object (DSO) Support
#
# To be able to use the functionality of a module which was built as a DSO
# you have to place corresponding 'LoadModule' lines at this location so the
# directives contained in it are actually available _before_ they are used
# Statically compiled modules (those listed by 'httpd -l') do not need
# to be loaded here.
#
# Example:
# LoadModule foo_module modules/mod_foo.so
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LoadModule access_compat_module modules/mod_access_compat.so
LoadModule actions_module modules/mod_actions.so
LoadModule alias_module modules/mod_alias.so
LoadModule allowmethods_module modules/mod_allowmethods.so
LoadModule asis_module modules/mod_asis.so
LoadModule auth_basic_module modules/mod_auth_basic.so
LoadModule auth_digest_module modules/mod_auth_digest.so
LoadModule auth_form_module modules/mod_auth_form.so
LoadModule authn_anon_module modules/mod_authn_anon.so
LoadModule authn_core_module modules/mod_authn_core.so

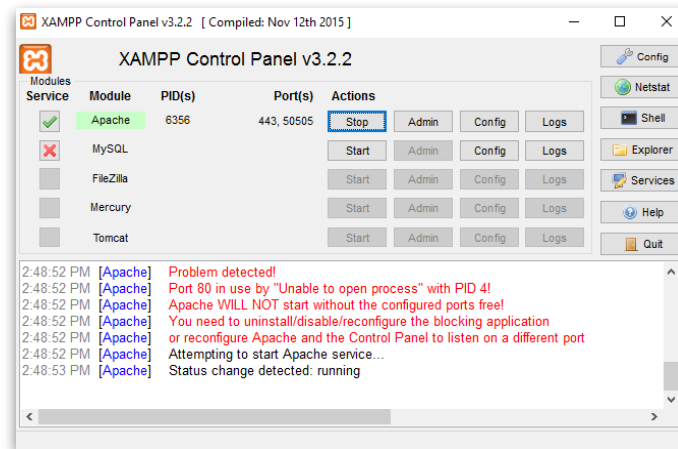
```

4. Save the configuration file

Yealink Connector Web Service (cont.)

Configure server to listen on port 50505 (cont.)

5. Start the Apache server and verify that it is starting on port 50505 (note: you may also see port 443 which indicates Apache is also listening on that port - if that conflicts you may have to change http-ssl.conf file so that it listens on another port).

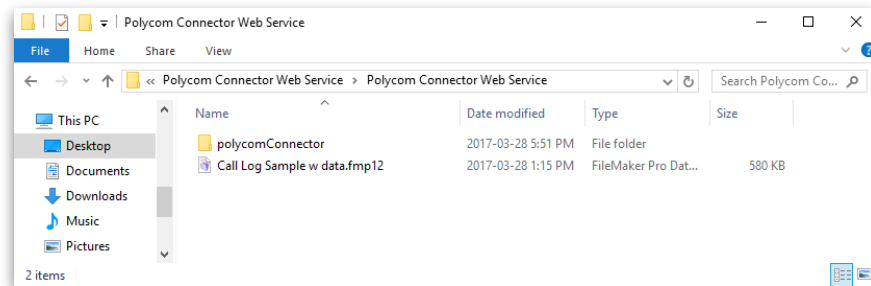


Install the Yealink Connector web service scripts

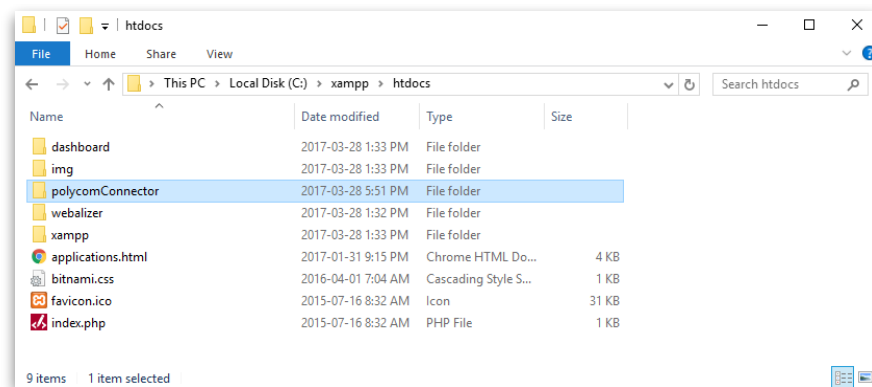
1. Download the

Install the Yealink Connector web service scripts

1. Expand the "Polycom Connector Web Service.zip" file and locate the "polycomConnector" folder



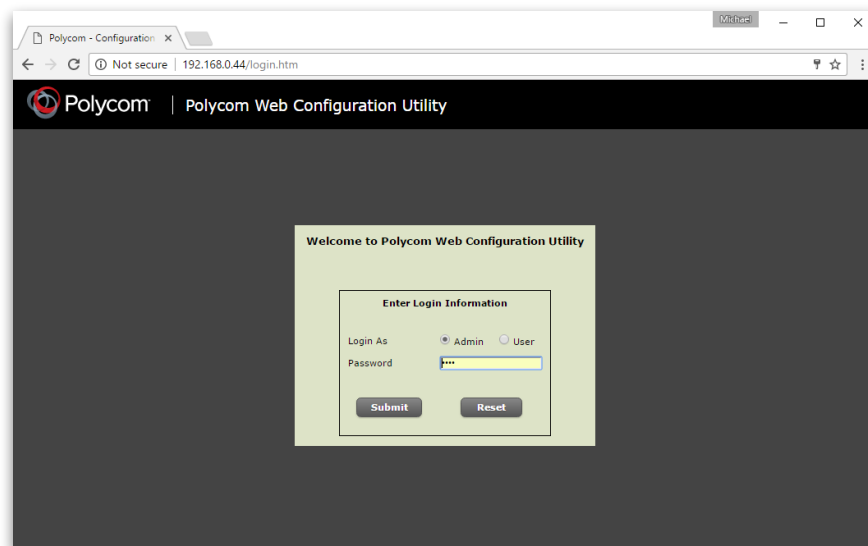
2. Copy the the “polycomConnector” folder to the Apache web server root folder (XAMPP default root folder is “C:\xampp\htdocs”)



Configure Polycom VVX400 Phone

Set up for the Polycom VVX phone set is done by individually configuring each set through the admin web interface on each set. You will need to know the administration password for each set.

1. From a computer that can access the IP address of the phone (e.g. is on the same network) open a browser and enter the IP address of the phone



2. Login to the phone as Admin
3. Navigate to Settings → Applications

Configure Polycom VVX400 Phone (cont.)

4. In the Telephone Event Notification area:

1. In the Notification URL enter “<computer ip>:50505/polycomConnector/” where “<compute ip>” is the IP address for the computer associated to this phone (e.g. if this is phone with ip “10.2.1.91” enter “10.2.1.31:50505/polycomConnector/”)
2. Select the “Incoming Call”, “Onhook” and “Offhook” events

5. In the Push area:

1. For “Allow Push Messages” select the “All” option
2. For the user name enter “Push”
3. For the password enter “Push”

6. Click “Save” to save the options on the phone (note that the changes are now live on the phone and these changes do **not** require the phone to reboot)

The screenshot shows the Polycom VVX400 web interface. The browser address bar shows "192.168.0.44/index.htm". The page title is "Polycom | vvX 400". The navigation menu includes Home, Simple Setup, Preferences, Settings, Diagnostics, and Utilities. The user is logged in as Admin. The main content area is titled "Applications" and contains several sections:

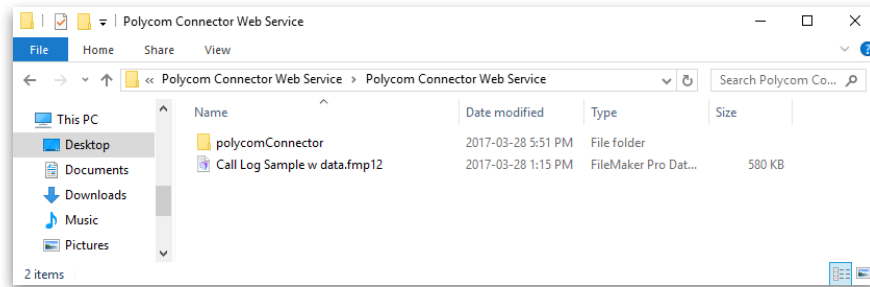
- Telephony Event Notification**: A table for configuring event notifications. The "Configured Telephony Notification URL" is "192.168.0.44:50505/polycomC". The "Line Registration Call" checkbox is checked. The "Incoming Outgoing Call" checkbox is checked. The "Onhook Offhook Login and Logout" checkbox is checked. The "Call State Change" checkbox is checked. There are "Add" and "Remove" buttons.
- Phone State Polling**: A section for configuring phone state polling.
- Push**: A section for configuring push messages. The "Allow Push Messages" dropdown is set to "All". The "Application Server Root URL" is empty. The "User Name" is "Push" and the "Password" is "Push".
- Polycom Desktop Connector Client**: A section for configuring the desktop connector client.
- Exchange Applications**: A section for configuring exchange applications.

A note at the bottom states: "Note: Fields require a phone reboot/restart." There are buttons for "Cancel", "Reset to Default", "View Modifications", and "Save".

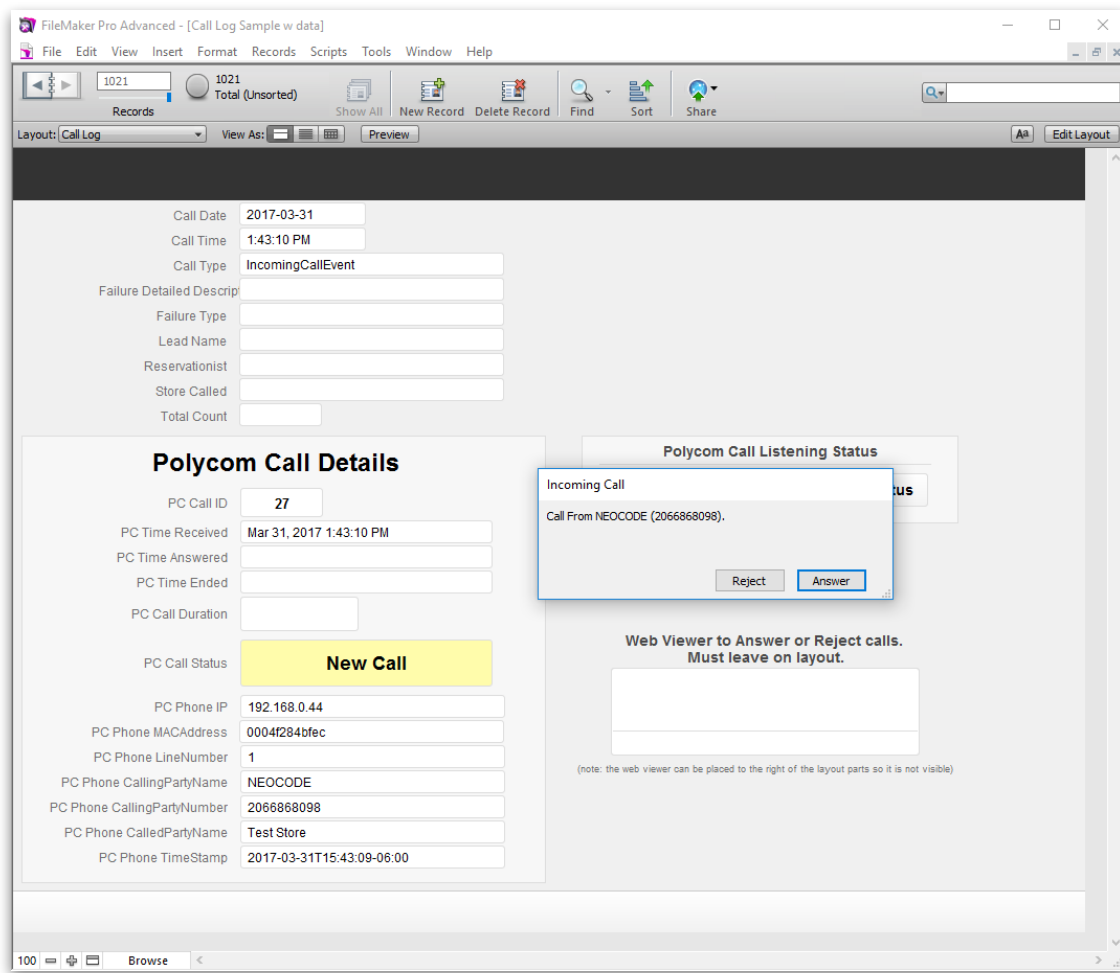
Setup Verification and Debug

To verify that the installation:

1. open the “Call Log Sample w data.fmp12” sample database in zip file



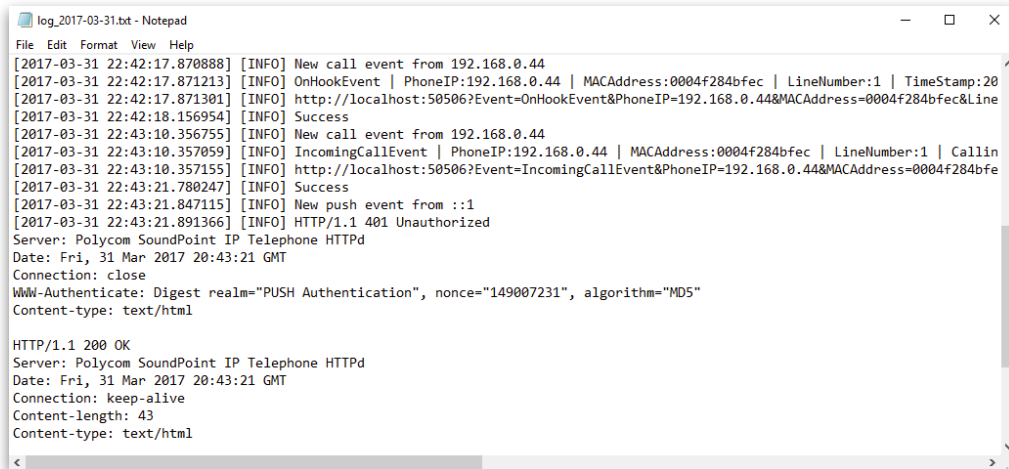
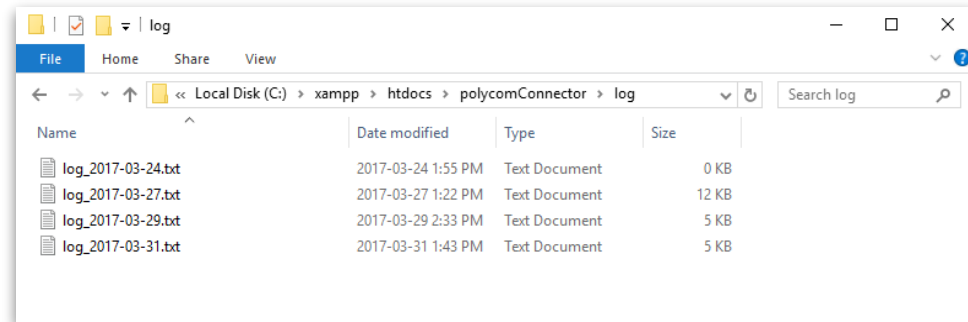
2. call the phone set up for that computer and if everything is working you will see the “Incoming Call” dialog



Setup Verification and Debug (cont.)

If there are problems here are ways to debug.

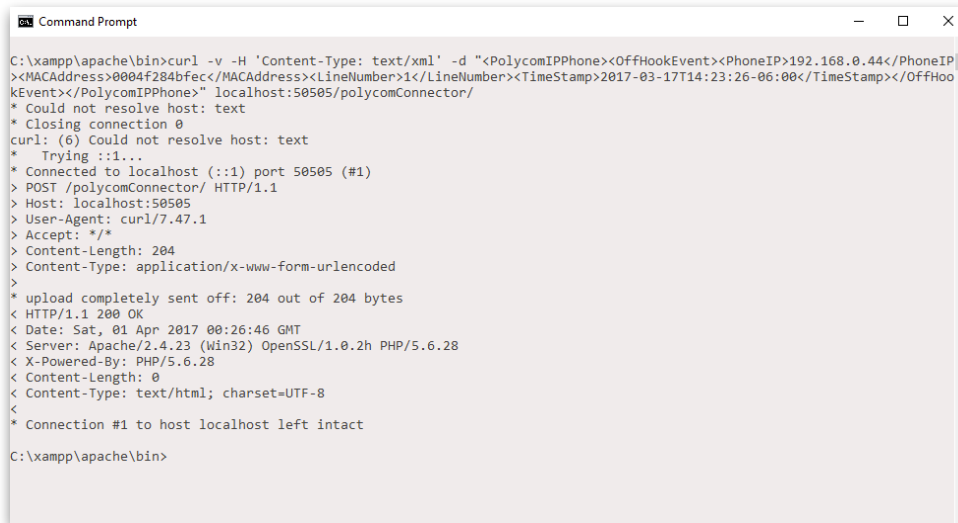
1. **Check the web service log** - the web service creates a log of all events received in a folder in Windows. The log files are located in the log folder inside of the polycomConnector folder (default will be "C:\xampp\htdocs\polycomConnector\log"). There is a log file for each day.



2. **Test the web service with curl** - XAMPP comes with the curl command that will allow you to test the web service from a Windows Command Prompt. Copy and paste this command into a command prompt to test:

```
curl -v -H 'Content-Type: text/xml' -d
"<PolycomIPPhone><OffHookEvent><PhoneIP>192.168.0.44</
PhoneIP><MACAddress>0004f284bfec</MACAddress><LineNumber>1</
LineNumber><TimeStamp>2017-03-17T14:23:26-06:00</TimeStamp></OffHookEvent></
PolycomIPPhone>" localhost:50505/polycomConnector/
```

Setup Verification and Debug (cont.)

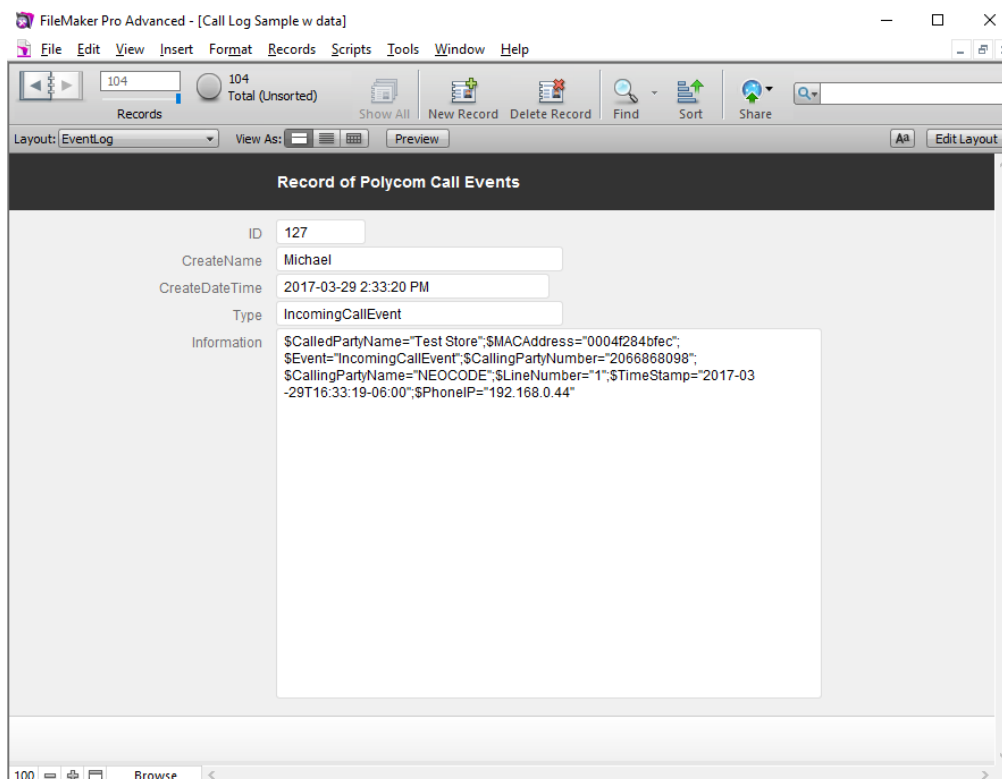


```
C:\xampp\apache\bin>curl -v -H 'Content-Type: text/xml' -d "<PolycomIPPhone><OffHookEvent><PhoneIP>192.168.0.44</PhoneIP>
><MACAddress>0004f284bfec</MACAddress><LineNumber>1</LineNumber><TimeStamp>2017-03-17T14:23:26-06:00</TimeStamp></OffHoo
kEvent></PolycomIPPhone>" localhost:50505/polycomConnector/
* Could not resolve host: text
* Closing connection 0
curl: (6) Could not resolve host: text
* Trying ::1...
* Connected to localhost (::1) port 50505 (#1)
> POST /polycomConnector/ HTTP/1.1
> Host: localhost:50505
> User-Agent: curl/7.47.1
> Accept: */*
> Content-Length: 204
> Content-Type: application/x-www-form-urlencoded
* upload completely sent off: 204 out of 204 bytes
< HTTP/1.1 200 OK
< Date: Sat, 01 Apr 2017 00:26:46 GMT
< Server: Apache/2.4.23 (win32) OpenSSL/1.0.2h PHP/5.6.28
< X-Powered-By: PHP/5.6.28
< Content-Length: 0
< Content-Type: text/html; charset=UTF-8
* Connection #1 to host localhost left intact

C:\xampp\apache\bin>
```

Check the web service log to verify it worked.

3. **Check the EventLog in FileMaker** - the FileMaker script records each call event (IncomingCallEvent, OffHookEvent, or OnHookEvent) in the EventLog table. The EventLog layout can be checked to confirm whether an event has been received from RemoteScripter.



Setup Verification and Debug (cont.)

4. **Test RemoteScripter with a browser** - open a browser window and enter the URL "localhost:50506/?Event=Testing". If all works in the window you will see "Error" and you will see a new entry in the EventLog table.

